

WHAT IS CLAIMED IS:

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1. A data recording device, comprising:
 - a recording unit that records data on a recording medium, said recording medium including a plurality of recorded regions each having data recorded by the recording unit and a plurality of unrecorded regions without any data recorded; and
 - a recording state determination unit that stores recording state data for distinguishing the recorded regions from the unrecorded regions;
- wherein
- the recording unit includes a mark recording unit configured to record a mark in one of the unrecorded regions preceding an object region to which the recording unit is to record data, said mark enabling reading of the object region; and
- the recording state determination unit identifies said marked region as one of the unrecorded regions.

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2. The data recording device as claimed in claim 1, wherein the mark includes dummy data used for generating a synchronization signal when reading data on the recording medium.

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3. The data recording device as claimed in claim 1, wherein the mark includes one ECC block of dummy data when the recording medium is in compliance with a DVD+RW disk standard.

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4. The data recording device as claimed in claim 1, wherein the recording state determination unit stores the recording state data for each minimum recording region of the recording medium to determine a recording state of each of the minimum recording regions.

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5. The data recording device as claimed in claim 1, wherein the recording state determination unit distinguishes the recorded region from the unrecorded region based on a bitmap including a plurality of one-bit recording state flags.

10 6. The data recording device as claimed in claim 5, further comprising a recording state flag storing unit configured to store the recording state flags.

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7. The data recording device as claimed in claim 5, further comprising a recording state flag recording unit configured to record the recording state flags to a recording state flag recording region in the recording medium.

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8. The data recording device as claimed in claim 7, wherein the recording state flag recording region is allocated in a Formatting Disk Control Block (FDCB) in a lead-in area of the recording medium, when
5 the recording medium is in compliance with a DVD+RW disk standard.

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9. A method for recording data on a recording medium including a plurality of recorded regions each having data recorded and a plurality of unrecorded regions without any data recorded, the
15 method comprising the steps of:
storing recording state data for distinguishing the recorded regions from the unrecorded regions;
recording a mark in one of the unrecorded
20 regions preceding an object region to which data are to be recorded, said mark enabling reading of the object region; and
identifying said marked region as one of the unrecorded regions.

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10. A program executable by a computer for recording data on a recording medium including a plurality of recorded regions each having data recorded and a plurality of unrecorded regions without any data recorded, the program comprising the steps of:

storing recording state data for distinguishing the recorded regions from the unrecorded regions;

recording a mark in one of the unrecorded regions preceding an object region to which data are to be recorded, said mark enabling reading of the object region; and

identifying said marked region as one of the unrecorded regions.

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11. A storage medium that stores a program executable by a computer for recording data on a recording medium including a plurality of recorded regions each having data recorded and a plurality of unrecorded regions without any data recorded, the program comprising the steps of:

storing recording state data for

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distinguishing the recorded regions from the unrecorded regions;

recording a mark in one of the unrecorded regions preceding an object region to which data are to
5 be recorded, said mark enabling reading of the object region; and

identifying said marked region as one of the unrecorded regions.

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12. A data recording system comprising:

a host computer; and

15 a data recording device,

wherein

the data recording device comprises:

a recording unit that records data on a recording medium, said recording medium including a
20 plurality of recorded regions each having data recorded by the recording unit and a plurality of unrecorded regions without any data recorded; and

a recording state determination unit that stores recording state data for distinguishing the
25 recorded regions from the unrecorded regions;

wherein

the recording unit includes a mark recording unit configured to record a mark in one of the unrecorded regions preceding an object region to which
5 the recording unit is to record data, said mark enabling reading of the object region; and

the recording state determination unit identifies said marked region as one of the unrecorded regions.